

Amendments To The Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

- 1-171. (cancelled)
172. (previously presented) An apparatus for use in performing human interbody spinal surgery comprising:
- a hollow tubular guard having a passage for providing guided access to a disc space and vertebral bodies adjacent the disc space, said guard having a proximal end, an opposite distal end, and a mid-longitudinal axis through said proximal and distal ends, said distal end of said guard being contoured to the curvature of the adjacent vertebral bodies, said guard having spine engaging portions at said distal end of said guard for holding said guard to the spine, said spine engaging portions being substantially in line with side surfaces of said guard so that said spine engaging portions do not substantially increase the outer cross-sectional dimension of said guard near the distal end of said guard, said guard having a flat portion between at least some of said spine engaging portions for preventing over-penetration of said spine engaging portions into the spine.
173. (previously presented) The apparatus of claim 172, wherein said guard is a hollow tubular sleeve.
174. (previously presented) The apparatus of claim 172, wherein said guard has a circular cross section.
175. (previously presented) The apparatus of claim 172, wherein said passage has a circular cross section.
176. (previously presented) An apparatus for use in performing human interbody spinal surgery comprising:
- a hollow tubular guard having a passage for providing guided access to a disc space and vertebral bodies adjacent the disc space, said guard having a proximal end, an opposite distal end, and a mid-longitudinal axis through said

proximal and distal ends, said guard having an increased outer dimension portion at its proximal end, said guard having spine engaging portions at said distal end of said guard for holding said guard to the spine, said spine engaging portions being substantially in line with side surfaces of said guard so that said spine engaging portions do not substantially increase the outer cross-sectional dimension of said guard near the distal end of said guard said guard having a flat portion between at least some of said spine engaging portions for preventing over-penetration of said spine engaging portions into the spine.

177. (previously presented) The apparatus of claim 172, wherein the contour of said distal end of said guard is adapted to permit an intimate fit between said guard and the adjacent vertebral bodies.
178. (previously presented) The apparatus of claim 172, wherein said guard has a footplate.
179. (previously presented) The apparatus of claim 172, further comprising means for cooperatively engaging to the proximal end of said guard an impaction end member for receiving an impaction force for driving said guard into the spine.
180. (previously presented) The apparatus of claim 172, further comprising a cap adapted to engage said proximal end of said guard.
181. (previously presented) The apparatus of claim 172, wherein said spine engaging portions are selected from at least one of teeth and pins.
182. (previously presented) The apparatus of claim 172, wherein said spine engaging portions are adapted to penetrate the adjacent vertebral bodies.
183. (previously presented) The apparatus of claim 172, wherein at least one of said spine engaging portions has a tapered leading end to facilitate placement of at least one of said spine engaging portions into the spine.
184. (previously presented) The apparatus of claim 172, wherein at least one of said spine engaging portions has upper and lower surfaces that are parallel to each other.
185. (withdrawn) The apparatus of claim 172, further comprising a removable inner guard.

186. (withdrawn) The apparatus of claim 185, wherein said removable inner guard is a hollow tubular sleeve.
187. (withdrawn) The apparatus of claim 185, wherein said removable inner guard is adapted to be inserted into said guard.
188. (withdrawn) The apparatus of claim 187, wherein said inner guard has limiting means for limiting the travel of said inner guard within said guard when said inner guard is inserted into said guard.
189. (withdrawn) The apparatus of claim 185, wherein said inner guard has a collar at one end larger than said passage of said guard.
190. (previously presented) The apparatus of claim 172, wherein said distal end further includes openings through said side surfaces of said guard.
191. (previously presented) The apparatus of claim 190, wherein said openings through said side surfaces of said guard are perpendicular to the mid-longitudinal axis of said guard.
192. (previously presented) The apparatus of claim 190, wherein said openings are slots through said side surfaces of said guard.
193. (previously presented) The apparatus of claim 192, wherein said slots are opposite one another.
194. (previously presented) The apparatus of claim 192, wherein said slots are parallel to one another.
195. (previously presented) The apparatus of claim 190, wherein said openings are two slots arranged parallel to one another and to the mid-longitudinal axis of said guard.
196. (withdrawn) The apparatus of claim 172, further comprising a bone removal device for forming through said guard an implantation space across the surgically corrected height of the disc space.
197. (withdrawn) The apparatus of claim 172, further comprising an implant driver sized in part for passage through said passage of said guard for passing an implant through said guard and into an implantation space.

198. (withdrawn) The apparatus of claim 197, wherein said implant driver comprises an elongated shaft having means for engaging an implant at one end and means for manipulating said implant driver at the other end of said elongated shaft.
199. (withdrawn) The apparatus of claim 198, further comprising means for limiting the depth of insertion of said implant driver into said guard.
200. (withdrawn) The apparatus of claim 199, wherein said limiting means includes a portion of said implant driver cooperating with said guard to limit the depth of insertion of said implant driver into said guard.
201. (previously presented) The apparatus of claim 172, further comprising a spinal distractor sized for passage through said guard, said spinal distractor having a body and a disc penetrating member extending from said body and into the disc space between the two adjacent vertebral bodies for bearing against adjacent endplates of the two adjacent vertebral bodies.
202. (previously presented) The apparatus of claim 201, wherein said disc penetrating member of said spinal distractor has a first portion for bearing against one of the endplates and a second portion for bearing against a second of the endplates, said first and second portions being in a parallel relationship to each other.
203. (withdrawn) The apparatus of claim 172, further comprising a tap for insertion through said guard for tapping the two adjacent vertebral bodies.
204. (withdrawn) The apparatus of claim 172, wherein said apparatus is in combination with a spinal implant.
205. (withdrawn) The apparatus of claim 204, wherein said implant is in combination with a fusion promoting material.
206. (withdrawn) The apparatus of claim 205, wherein said fusion promoting material is harvested bone.
207. (previously presented) An apparatus for use in performing human interbody spinal surgery comprising:
 - a hollow tubular guard having a passage for providing guided access to a disc space and vertebral bodies adjacent the disc space, said guard having a proximal end and an opposite distal end and sides therebetween, said guard

having openings in said sides, said guard having spine engaging portions at said distal end of said guard for holding said guard to the spine, said spine engaging portions being substantially in line with said sides of said guard so that said spine engaging portions do not substantially increase the outer cross-sectional dimension of said guard near the distal end of said guard.

- 208. (previously presented) The apparatus of claim 207, wherein a mid-longitudinal axis passing through the center of at least one of said openings in said sides is perpendicular to a mid-longitudinal axis of said guard.
- 209. (previously presented) The apparatus of claim 207, wherein said openings are at least two slots.
- 210. (previously presented) The apparatus of claim 209, wherein said slots are opposite one another.
- 211. (previously presented) The apparatus of claim 209, wherein said slots are parallel to one another.
- 212. (previously presented) The apparatus of claim 209, wherein said slots are parallel to one another and to a mid-longitudinal axis passing through said guard.
- 213. (previously presented) The apparatus of claim 209, wherein said openings in said sides divide at least a portion of said guard into an upper portion and a lower portion.
- 214. (previously presented) The apparatus of claim 213, wherein said upper portion and said lower portion are adapted to move apart from one another to facilitate the insertion of an implant.
- 215. (previously presented) The apparatus of claim 207, wherein said guard is a hollow tubular sleeve.
- 216. (previously presented) The apparatus of claim 207, wherein said guard has a circular cross section.
- 217. (previously presented) The apparatus of claim 207, wherein said passage has a circular cross section.
- 218. (previously presented) The apparatus of claim 207, wherein said guard has an increased outer dimension portion at its proximal end.

- 219. (previously presented) The apparatus of claim 207, wherein said distal end of said guard is contoured to the curvature of the adjacent vertebral bodies to permit an intimate fit between said guard and the adjacent vertebral bodies.
- 220. (previously presented) The apparatus of claim 207, wherein said guard has a footplate.
- 221. (previously presented) The apparatus of claim 207, further comprising means for cooperatively engaging to the proximal end of said guard an impaction end member for receiving an impaction force for driving said guard into the spine.
- 222. (previously presented) The apparatus of claim 207, further comprising a cap adapted to engage said proximal end of said guard.
- 223. (previously presented) The apparatus of claim 207, wherein said spine engaging portions are selected from at least one of teeth and pins.
- 224. (previously presented) The apparatus of claim 207, wherein said spine engaging portions are adapted to penetrate the adjacent vertebral bodies.
- 225. (previously presented) The apparatus of claim 207, wherein at least one of said spine engaging portions has a tapered leading end to facilitate placement of at least one of said spine engaging portions into the spine.
- 226. (previously presented) The apparatus of claim 207, wherein at least one of said spine engaging portions has upper and lower surfaces that are parallel to each other.
- 227. (withdrawn) The apparatus of claim 207, further comprising a removable inner guard.
- 228. (withdrawn) The apparatus of claim 227, wherein said removable inner guard is a hollow tubular sleeve.
- 229. (withdrawn) The apparatus of claim 227, wherein said removable inner guard is adapted to be inserted into said guard.
- 230. (withdrawn) The apparatus of claim 229, wherein said inner guard has limiting means for limiting the travel of said inner guard within said guard when said inner guard is inserted into said guard.

- 231. (withdrawn) The apparatus of claim 227, wherein said inner guard has a collar at one end larger than said passage of said guard.
- 232. (withdrawn) The apparatus of claim 207, further comprising a bone removal device for forming through said guard an implantation space across the surgically corrected height of the disc space.
- 233. (withdrawn) The apparatus of claim 207, further comprising an implant driver sized in part for passage through said passage of said guard for passing an implant through said guard and into an implantation space.
- 234. (withdrawn) The apparatus of claim 233, wherein said implant driver comprises an elongated shaft having means for engaging an implant at one end and means for manipulating said implant driver at the other end of said elongated shaft.
- 235. (withdrawn) The apparatus of claim 234, further comprising means for limiting the depth of insertion of said implant driver into said guard.
- 236. (withdrawn) The apparatus of claim 235, wherein said limiting means includes a portion of said implant driver cooperating with said guard to limit the depth of insertion of said implant driver into said guard.
- 237. (previously presented) The apparatus of claim 207, further comprising a spinal distractor sized for passage through said guard, said spinal distractor having a body and a disc penetrating member extending from said body and into the disc space between the two adjacent vertebral bodies for bearing against adjacent endplates of the two adjacent vertebral bodies.
- 238. (previously presented) The apparatus of claim 237, wherein said disc penetrating member of said spinal distractor has a first portion for bearing against one of the endplates and a second portion for bearing against a second of the endplates, said first and second portions being in a parallel relationship to each other.
- 239. (withdrawn) The apparatus of claim 207, further comprising a tap for insertion through said guard for tapping the two adjacent vertebral bodies.
- 240. (withdrawn) The apparatus of claim 207, wherein said apparatus is in combination with a spinal implant.

- 241. (withdrawn) The apparatus of claim 240, wherein said implant is in combination with a fusion promoting material.
- 242. (withdrawn) The apparatus of claim 241, wherein said fusion promoting material is harvested bone.
- 243. (withdrawn) The apparatus of claim 201, wherein said spinal distractor further comprises means for limiting the penetration of said disc penetrating member into the disc space.
- 244. (withdrawn) The apparatus of claim 243, wherein said limiting means comprises a shoulder on said body at the juncture of said disc penetrating member and said body for preventing said body from entering the disc space.
- 245. (withdrawn) The apparatus of claim 237, wherein said spinal distractor further comprises means for limiting the penetration of said disc penetrating member into the disc space.
- 246. (withdrawn) The apparatus of claim 245, wherein said limiting means comprises a shoulder on said body at the juncture of said disc penetrating member and said body for preventing said body from entering the disc space.
- 247. (previously presented) The apparatus of claim 172, wherein said guard has a wall that is continuous around the mid-longitudinal axis of said guard.
- 248. (currently amended) An apparatus for use in human lumbar interbody spinal surgery comprising:

a hollow guard having a passage for providing guided access to a disc space and vertebral bodies adjacent the disc space, said passage having an inner diameter of at least 16.5 mm to permit the movement of a spinal implant therethrough, said guard having a proximal end, an opposite distal end, and a mid-longitudinal axis through said proximal and distal ends, said guard having extensions at said distal end of said guard, at least two of said extensions being adapted to penetrate the disc space between the adjacent endplates of the adjacent vertebral bodies, said extensions being at least in part in line with side surfaces of said ~~passage guard so that~~ said extensions do not substantially increasingincrease the outer cross-sectional dimension of said guard near the

distal end of said guard, said guard having a flat portion between at least some of said extensions for preventing over-penetration of said extensions into the spine, said guard having a wall that is continuous around the mid-longitudinal axis of said guard.

249. (previously presented) The apparatus of claim 248, wherein the inner diameter of said passage is at least 18 mm.
250. (previously presented) The apparatus of claim 248, wherein said passage is configured to provide guided access to a bone removal device having a cutting portion with a diameter less than that of the spinal implant.
251. (previously presented) The apparatus of claim 248, in combination with a spinal implant sized for passage through said guard.
252. (previously presented) The apparatus of claim 248, wherein at least two of said extensions are diametrically opposed to one another.
253. (previously presented) The apparatus of claim 248, wherein said guard is a hollow tubular sleeve.
254. (previously presented) The apparatus of claim 248, wherein said guard has a circular cross section.
255. (previously presented) The apparatus of claim 248, wherein said passage has a circular cross section.
256. (previously presented) The apparatus of claim 248, wherein said guard has an increased outer dimension portion at its proximal end.
257. (previously presented) The apparatus of claim 248, wherein said distal end of said guard is contoured to the curvature of the adjacent vertebral bodies to permit an intimate fit between said guard and the adjacent vertebral bodies.
258. (previously presented) The apparatus of claim 248, wherein said guard has a footplate.
259. (previously presented) The apparatus of claim 248, further comprising means for cooperatively engaging to the proximal end of said guard an impaction end member for receiving an impaction force for driving said guard into the spine.

- 260. (previously presented) The apparatus of claim 248, further comprising a cap adapted to engage said proximal end of said guard.
- 261. (previously presented) The apparatus of claim 248, wherein said extensions are selected from at least one of teeth, pins, and projections.
- 262. (previously presented) The apparatus of claim 248, wherein said extensions are adapted to penetrate the adjacent vertebral bodies.
- 263. (previously presented) The apparatus of claim 248, wherein at least one of said extensions has a tapered leading end to facilitate placement of at least one of said extensions into the spine.
- 264. (previously presented) The apparatus of claim 248, wherein at least one of said extensions has upper and lower surfaces that are parallel to each other.
- 265. (previously presented) The apparatus of claim 248, further comprising a removable inner guard.
- 266. (previously presented) The apparatus of claim 265, wherein said removable inner guard is a hollow tubular sleeve.
- 267. (previously presented) The apparatus of claim 265, wherein said removable inner guard is adapted to be inserted into said guard.
- 268. (previously presented) The apparatus of claim 267, wherein said inner guard has limiting means for limiting the travel of said inner guard within said guard when said inner guard is inserted into said guard.
- 269. (previously presented) The apparatus of claim 265, wherein said inner guard has a proximal end having an increased cross sectional dimension to prevent passage of said inner guard through said passage of said guard.
- 270. (previously presented) The apparatus of claim 248, wherein said distal end further includes openings through said side surfaces of said guard.
- 271. (previously presented) The apparatus of claim 270, wherein said openings through said side surfaces of said guard are perpendicular to the mid-longitudinal axis of said guard.
- 272. (previously presented) The apparatus of claim 270, wherein said openings are slots through said side surfaces of said guard.

- 273. (previously presented) The apparatus of claim 272, wherein said slots are opposite one another.
- 274. (previously presented) The apparatus of claim 272, wherein said slots are parallel to one another.
- 275. (previously presented) The apparatus of claim 270, wherein said openings are two slots arranged parallel to one another and to the mid-longitudinal axis of said guard.
- 276. (previously presented) The apparatus of claim 248, further comprising a bone removal device for forming through said guard an implantation space across the surgically corrected height of the disc space.
- 277. (previously presented) The apparatus of claim 248, further comprising an implant driver sized in part for passage through said passage of said guard for passing the implant through said guard and into an implantation space.
- 278. (previously presented) The apparatus of claim 277, wherein said implant driver comprises an elongated shaft having means for engaging the implant at one end and means for manipulating said implant driver at the other end of said elongated shaft.
- 279. (previously presented) The apparatus of claim 278, further comprising means for limiting the depth of insertion of said implant driver into said guard.
- 280. (previously presented) The apparatus of claim 279, wherein said limiting means includes a portion of said implant driver cooperating with said guard to limit the depth of insertion of said implant driver into said guard.
- 281. (previously presented) The apparatus of claim 248, further comprising a spinal distractor sized for passage through said guard, said spinal distractor having a body and a disc penetrating member extending from said body and into the disc space between the two adjacent vertebral bodies for bearing against adjacent endplates of the two adjacent vertebral bodies.
- 282. (previously presented) The apparatus of claim 281, wherein said disc penetrating member of said spinal distractor has a first portion for bearing against one of the

- endplates and a second portion for bearing against a second of the endplates, said first and second portions being in a parallel relationship to each other.
283. (previously presented) The apparatus of claim 281, wherein said spinal distractor further comprises means for limiting the penetration of said disc penetrating member into the disc space.
284. (previously presented) The apparatus of claim 283, wherein said limiting means comprises a shoulder on said body at the juncture of said disc penetrating member and said body for preventing said body from entering the disc space.
285. (previously presented) The apparatus of claim 248, further comprising a tap for insertion through said guard for tapping the two adjacent vertebral bodies.
286. (previously presented) The apparatus of claim 248, wherein said apparatus is in combination with a spinal implant.
287. (previously presented) The apparatus of claim 286, wherein said implant is in combination with a fusion promoting material.
288. (previously presented) The apparatus of claim 287, wherein said fusion promoting material is harvested bone.
289. (previously presented) An apparatus for use in human lumbar interbody spinal surgery comprising:
a hollow guard having a passage for providing guided access to a disc space and vertebral bodies adjacent the disc space, said passage having an inner diameter of at least 16.5 mm to permit the movement of a spinal implant therethrough, said guard having a proximal end and an opposite distal end and sides therebetween, said guard having openings in said sides, said guard having extensions at said distal end of said guard, at least two of said extensions being adapted to penetrate the disc space between the adjacent endplates of the adjacent vertebral bodies, said extensions being at least in part in line with said sides of said guard so that said extensions do not substantially increase the outer cross-sectional dimension of said guard near the distal end of said guard.
290. (previously presented) The apparatus of claim 289, wherein the inner diameter of said passage is at least 18 mm.

- 291. (previously presented) The apparatus of claim 289, wherein said passage is configured to provide guided access to a bone removal device having a cutting portion with a diameter less than that of the spinal implant.
- 292. (previously presented) The apparatus of claim 289, in combination with a spinal implant sized for passage through said guard.
- 293. (previously presented) The apparatus of claim 289, wherein at least two of said extensions are diametrically opposed to one another.
- 294. (previously presented) The apparatus of claim 289, wherein a mid-longitudinal axis passing through the center of at least one of said openings in said sides is perpendicular to a mid-longitudinal axis of said guard.
- 295. (previously presented) The apparatus of claim 289, wherein said openings are at least two slots.
- 296. (previously presented) The apparatus of claim 295, wherein said slots are opposite one another.
- 297. (previously presented) The apparatus of claim 295, wherein said slots are parallel to one another.
- 298. (previously presented) The apparatus of claim 295, wherein said slots are parallel to one another and to a mid-longitudinal axis passing through said apparatus.
- 299. (previously presented) The apparatus of claim 295, wherein said openings in said sides divide at least a portion of said guard into an upper portion and a lower portion.
- 300. (previously presented) The apparatus of claim 299, wherein said upper portion and said lower portion are adapted to move apart from one another to facilitate the insertion of the implant.
- 301. (previously presented) The apparatus of claim 289, wherein said guard is a hollow tubular sleeve.
- 302. (previously presented) The apparatus of claim 289, wherein said guard has a circular cross section.

303. (previously presented) The apparatus of claim 289, wherein said passage has a circular cross section.
304. (previously presented) The apparatus of claim 289, wherein said guard has an increased outer dimension portion at its proximal end.
305. (previously presented) The apparatus of claim 289, wherein said distal end of said guard is contoured to the curvature of the adjacent vertebral bodies to permit an intimate fit between said guard and the adjacent vertebral bodies.
306. (previously presented) The apparatus of claim 289, wherein said guard has a footplate.
307. (previously presented) The apparatus of claim 289, further comprising means for cooperatively engaging to the proximal end of said guard an impaction end member for receiving an impaction force for driving said guard into the spine.
308. (previously presented) The apparatus of claim 289, further comprising a cap adapted to engage said proximal end of said guard.
309. (previously presented) The apparatus of claim 289, wherein said extensions are selected from at least one of teeth, pins, and projections.
310. (previously presented) The apparatus of claim 289, wherein said extensions are adapted to penetrate the adjacent vertebral bodies.
311. (previously presented) The apparatus of claim 289, wherein at least one of said extensions has a tapered leading end to facilitate placement of at least one of said extensions into the spine.
312. (previously presented) The apparatus of claim 289, wherein at least one of said extensions has upper and lower surfaces that are parallel to each other.
313. (previously presented) The apparatus of claim 289, further comprising a removable inner guard.
314. (previously presented) The apparatus of claim 313, wherein said removable inner guard is a hollow tubular sleeve.
315. (previously presented) The apparatus of claim 313, wherein said removable inner guard is adapted to be inserted into said guard.

316. (previously presented) The apparatus of claim 315, wherein said inner guard has limiting means for limiting the travel of said inner guard within said guard when said inner guard is inserted into said guard.
317. (previously presented) The apparatus of claim 313, wherein said inner guard has a proximal end having an increased cross sectional dimension to prevent passage of said inner guard through said passage of said guard.
318. (previously presented) The apparatus of claim 289, further comprising a bone removal device for forming through said guard an implantation space across the surgically corrected height of the disc space.
319. (previously presented) The apparatus of claim 289, further comprising an implant driver sized in part for passage through said passage of said guard for passing the implant through said guard and into an implantation space.
320. (previously presented) The apparatus of claim 319, wherein said implant driver comprises an elongated shaft having means for engaging the implant at one end and means for manipulating said implant driver at the other end of said elongated shaft.
321. (previously presented) The apparatus of claim 320, further comprising means for limiting the depth of insertion of said implant driver into said guard.
322. (previously presented) The apparatus of claim 321, wherein said limiting means includes a portion of said implant driver cooperating with said guard to limit the depth of insertion of said implant driver into said guard.
323. (previously presented) The apparatus of claim 289, further comprising a spinal distractor sized for passage through said guard, said spinal distractor having a body and a disc penetrating member extending from said body and into the disc space between the two adjacent vertebral bodies for bearing against adjacent endplates of the two adjacent vertebral bodies.
324. (previously presented) The apparatus of claim 323, wherein said disc penetrating member of said spinal distractor has a first portion for bearing against one of the endplates and a second portion for bearing against a second of the endplates, said first and second portions being in a parallel relationship to each other.

- 325. (previously presented) The apparatus of claim 323, wherein said spinal distractor further comprises means for limiting the penetration of said disc penetrating member into the disc space.
- 326. (previously presented) The apparatus of claim 325, wherein said limiting means comprises a shoulder on said body at the juncture of said disc penetrating member and said body for preventing said body from entering the disc space.
- 327. (previously presented) The apparatus of claim 289, further comprising a tap for insertion through said guard for tapping the two adjacent vertebral bodies.
- 328. (previously presented) The apparatus of claim 289, wherein said apparatus is in combination with a spinal implant.
- 329. (previously presented) The apparatus of claim 328, wherein said implant is in combination with a fusion promoting material.
- 330. (previously presented) The apparatus of claim 329, wherein said fusion promoting material is harvested bone.
- 331. (new) The apparatus of claim 172, wherein said spine engaging portions are substantially in line with side surfaces of said passage.